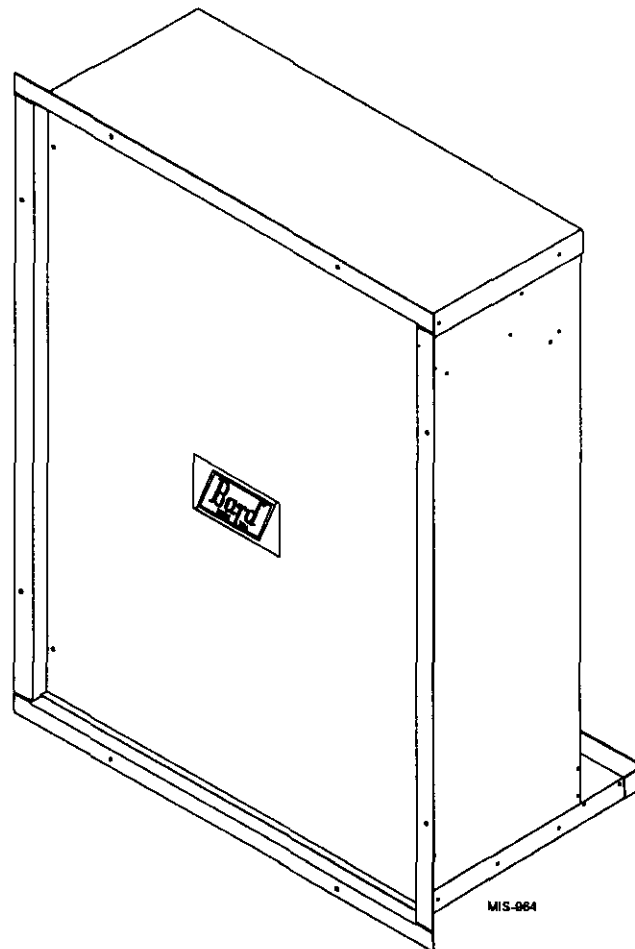

Installation Instructions

Q/TEC Wall Sleeve

Model: QWS42



Bard Manufacturing Company
Bryan, Ohio 43506

*Since 1914...Moving ahead, just as
planned.*

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Getting Other Information and Publications

These publications can help you install the air conditioner or heat pump. You can usually find these at your local library or purchase them directly from the publisher. Be sure to consult current edition of each standard.

Standard for the Installation ANSI/NFPA 90A
of Air Conditioning and
Ventilating Systems

Standard for Warm Air ANSI/NFPA 90B
Heating and Air
Conditioning Systems

Q/TEC Installation Instruction Manual Bard/2100-288

For more information, contact these publishers:

ACCA — Air Conditioning Contractors of America
1513 16th Street N.W.
Washington, DC 20036
Telephone: (202) 483-9370
Fax: (202) 234-4721

ANSI — American National Standards Institute
11 West Street, 13th Floor
New York, NY 10036
Telephone: (212) 642-4900
Fax: (212) 302-1286

**ASHRAE — American Society of Heating Refrigerating, and
Air Conditioning Engineers, Incorporated**
1791 Tullie Circle, N.E.
Atlanta, GA 30329-2305
Telephone: (404) 636-8400
Fax: (404) 321-5478

BARD — Bard Manufacturing Company
1914 Randolph Drive
Bryan, OH 43506
Telephone: (419) 636-1194
Fax: (419) 636-2640

SHIPPING DAMAGE

Upon receipt of equipment, the carton should be checked for external signs of shipping damage. If damage is found, the receiving party must contact the last carrier immediately, preferably in writing, requesting inspection by the carrier's agent.

GENERAL

The QWS42 is designed for use with the Q/TEC Series Heat Pumps. The QWS42 is for use with wall thickness of 5 to 14 inches. One QWS42 is required for each heat pump to be installed.

The equipment covered in this manual is to be installed by trained service and installation technicians.

These instructions explain the recommended method to install the wall sleeve.

These instructions and any instructions packaged with any separate equipment required to make the entire air conditioning system should be carefully read before beginning the installation.

While these instructions are intended as a general recommended guide, they do not supersede any national and/or local codes in any way. Authorities having jurisdiction should be consulted before the installation is made.

INSTALLATION – WOOD FRAMED WALLS

For wood frame construction walls, the dimensions of the opening must be 48 inches tall by 35 inches wide. A 2x6 header will be required for the opening. The sides of the opening must have trimmer studs to support the header, and to provide a structural member on which to fasten the sleeve. See Figure 1. All of the dimensions are referenced from the finished floor height.

After the opening is framed in, a treated 2x6 bottom support and seal plate must be cut to fit in the bottom of the opening. Construction adhesive should be applied to the 2x6 before it is put in place. This will help hold the plate in place and provide an additional seal for the bottom of the opening. The treated 2x6 must be fastened to the bottom of the opening flush to the finished surface of the outside wall. The 2x6 must be sealed to the outside wall with construction adhesive. Any gaps between the sides of the 2x6 plate and the opening must also be sealed. See Figure 2. *NOTE:* Actual thickness of 2x6 must be 1-1/2".

Once the opening is framed, the sheeting can be installed, the sheeting material must not extend into the opening.

The sleeve should be test fit into the opening to make sure of the dimensions. The sleeve must be inserted into the opening from the outside of the building. The bottom of the sleeve must be level from side to side, and the sleeve must be square in the opening. A slope is built into the bottom of the sleeve from the inside to the outside. This will allow any water that gets into the sleeve to drain out. Once the test fit is completed, the sleeve must be removed from the opening, and two 1/4 inch beads of sealant must be applied to the mounting flanges of the sleeve. See Figure 3.

FIGURE 1 – WOOD FRAMED INSTALLATION

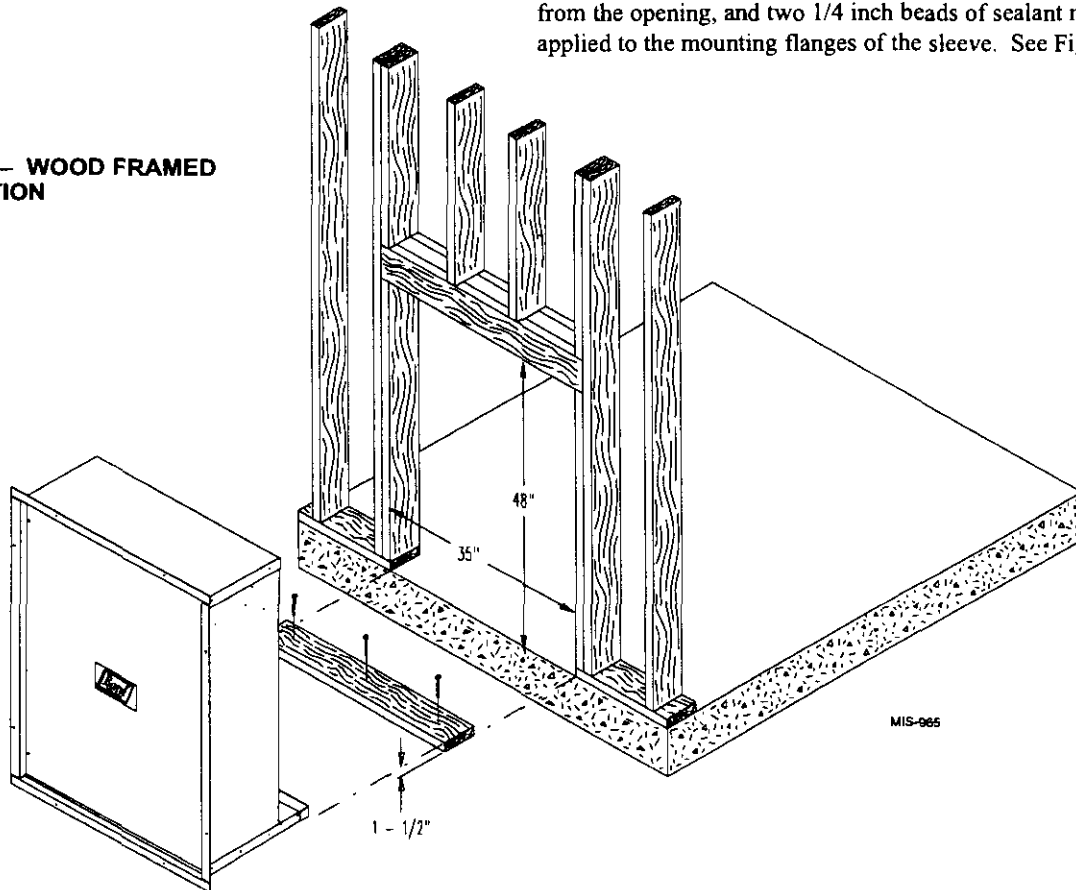


FIGURE 2 – APPLICATION OF SEALANT TO 2x6 PLATE

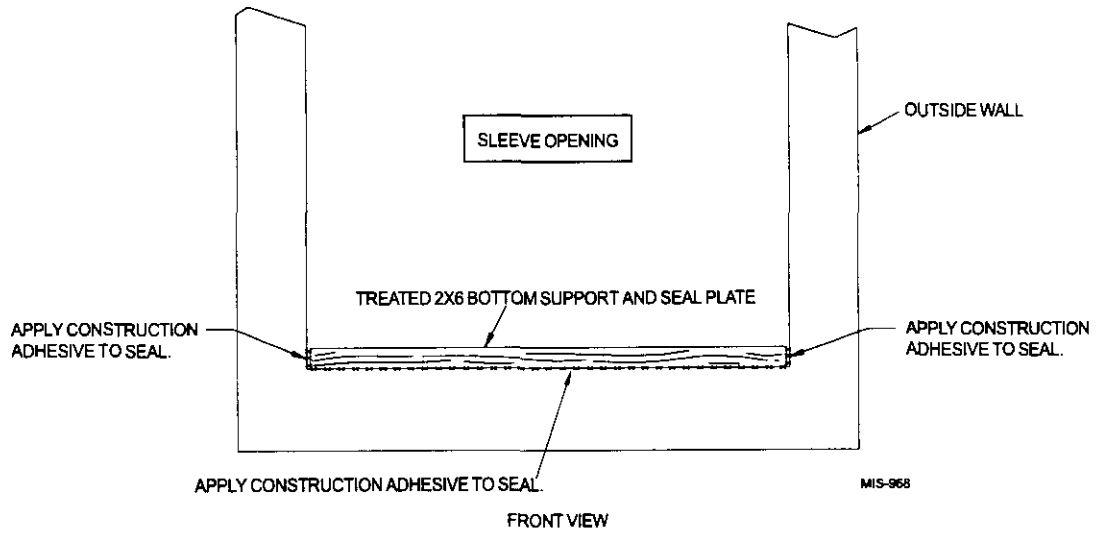
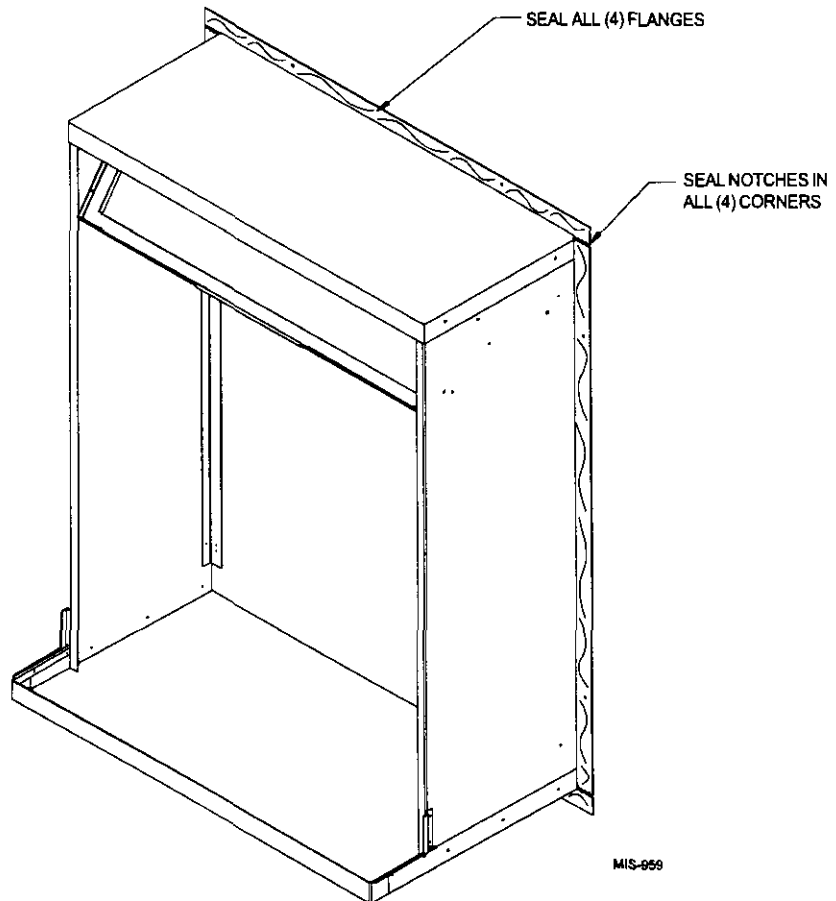


FIGURE 3 – APPLICATION OF SEALANT TO FLANGES



The sleeve is then reinserted into the prepared opening from the outside of the building. All of the mounting flanges must contact the exterior wall. Check to see that there is enough sealant to make this joint watertight. Additional sealant must be applied as necessary. The sleeve must be centered in the opening, and the bottom of the sleeve must be checked to make certain that it is level from side to side. The bottom flange should be secured to the wall by using two wood screws through the holes in the bottom mounting flange of the sleeve. The sleeve must be checked to make sure that it is square in the opening. Once the sleeve is square, the side and top mounting flanges of the sleeve must be secured to the wall with wood screws through the holes in the flanges. The gaps between the side flanges, and the top and bottom flanges must be filled with additional sealant.

On the inside of the building, the gaps between the sleeve and the opening must be filled with insulation. This will help insulate the sleeve and prevent infiltration of any unwanted outdoor air. See Figure 5.

If the Q/TEC unit will be drained through the wall, the drain line must be installed through the wall. Information for the drain installation is contained in the Q/TEC Installation Instructions.

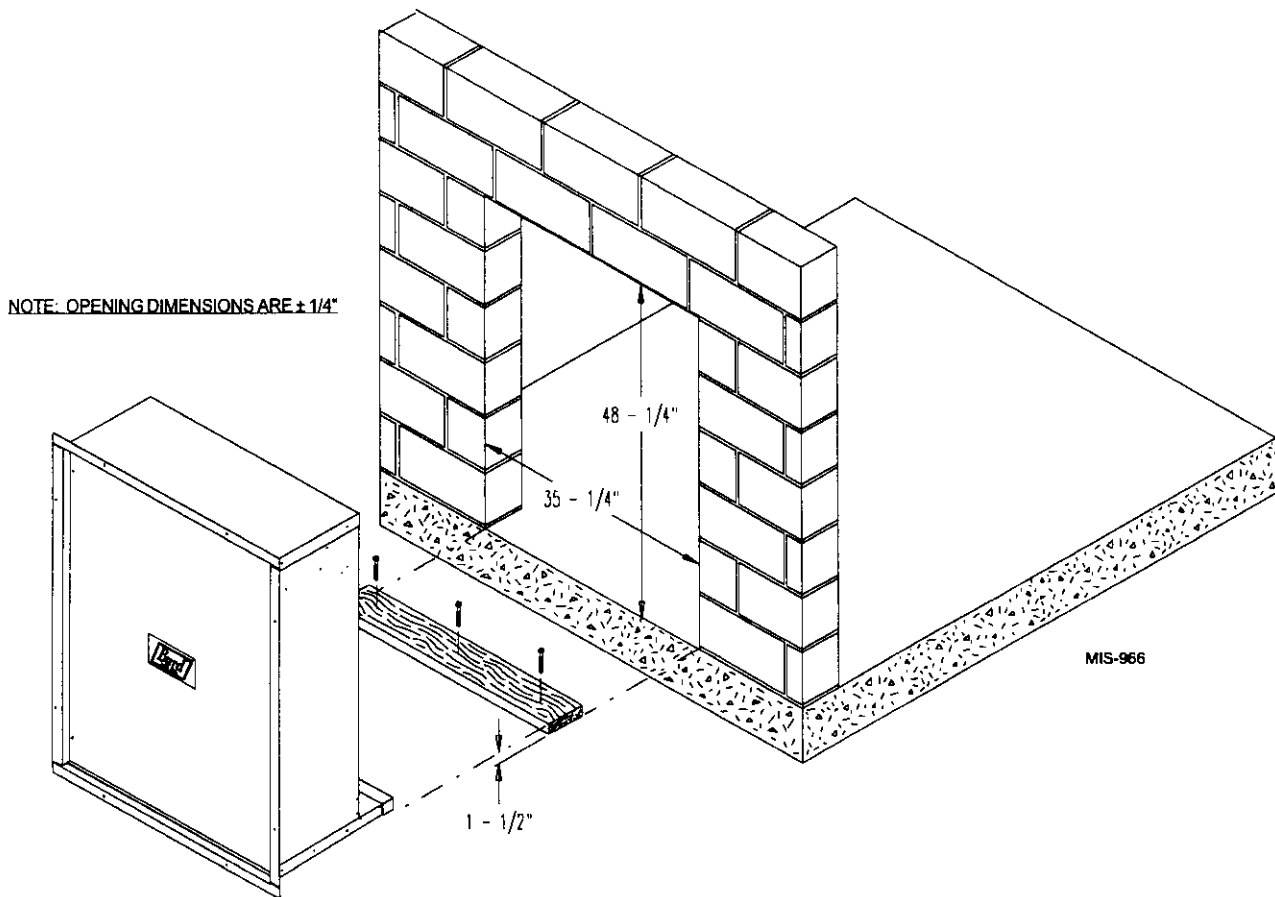
INSTALLATION – MASONRY CONSTRUCTION WALLS

For masonry construction walls, the dimensions for the opening will be 48-1/4 inches tall by 35-1/4 inches wide. These dimensions are plus or minus 1/4 inch and are measured from the finished floor height. See Figure 4. These will be the finish dimensions of the opening.

A 1 1/2 inch spacer needs to be installed in the bottom of the opening to raise the sleeve off the floor. A treated 2x6 board must be cut to fit in the bottom of the opening with 1/4 inch clearance on either side. Construction adhesive must be applied to the 2x6 board before it is placed in the bottom of the opening. This will help anchor the board to the opening and provide an extra seal to the floor. The board must be anchored to the bottom of the opening with concrete anchors flush to the outside finished wall surface. The board must be sealed to the outside wall with a waterproof sealant. The gaps between the sides of the opening and the board must also be filled with sealant. See Figure 2.

The sleeve should be test fit in the opening before final preparations are made. The sleeve will be installed into the opening from the outside of the building in. The sleeve must be

FIGURE 4 – MASONRY CONSTRUCTION INSTALLATION



centered in the opening from side to side. The mounting flanges of the sleeve must contact the outside wall all around the opening. The side and top mounting flanges must have the mounting holes drilled into the outside wall for the concrete anchors which will hold the sleeve in the wall. The holes should be drilled through the holes in the sleeve with the sleeve level and square in the opening. A Slope is built into the bottom of the sleeve from the inside to the outside. This will allow any water that gets into the sleeve to drain out. Once the test fitting has been checked out, the sleeve should be removed from the wall.

With the sleeve removed, two 1/4 inch beads of sealant must be applied to the flanges that contact the outside wall. See Figure 3. The sleeve must be installed back in the wall making sure that the predrilled holes in the wall line up with the holes in the mounting

flanges of the sleeve. Check to make sure that there is enough sealant between the wall and the flanges to make the joint watertight. Additional sealant must be applied as required. The sleeve must be anchored to the wall. All four mounting flanges must be fastened with two fasteners each to the outside wall. The gaps between the side flanges, and the top and bottom flanges must be sealed to the wall.

On the inside of the building, the gaps between the sleeve and the opening must be filled with insulation. This will help insulate the sleeve and prevent infiltration of any unwanted outdoor air. See Figure 5.

If the Q/TEC unit will be drained through the wall, the drain line must be installed through the wall. Information for the drain installation is contained in the Q/TEC Installation Instructions.

FIGURE 5 – TYPICAL INSTALLATION WITH 14" MAX. WALL THICKNESS

